How Does Industrial Hygiene help You?

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Industrial Hygiene's Contribution to Injury and Illness Reduction

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Key Points

- What is Industrial Hygiene (IH)
- How can IH data be used to minimize work-related injuries and illnesses.
- What are IH responsibilities at the installation level.
- What are IH issues in Mannheim.

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Industrial Hygiene: What is That?

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Industrial Hygiene: What is That?

The Environmental Coordinator observes soldiers and civilians in action, identifies the ways that they are doing their job that impact the environment and implements ways to get the job done more effectively without endangering the environment.

Industrial Hygiene: What is That?

The Industrial Hygienist observes people at work, identifies potential hazards in what they are doing and recommends ways to minimize the potential for that hazard to adversely impact the worker.

Industrial Hygiene: What is That?

- The Industrial Hygienist and the Environmental Coordinator work together to protect the soldier and his work environment so that the unit mission will be completed with minimal impact on the health of the soldier and the surrounding environment.

How Does IH Support DA?

- IH Interfaces with:
  - Occupational Health
  - Installation & Medical Safety
  - Preventive Medicine
  - Facilities Engineering
  - Environmental Coordinator

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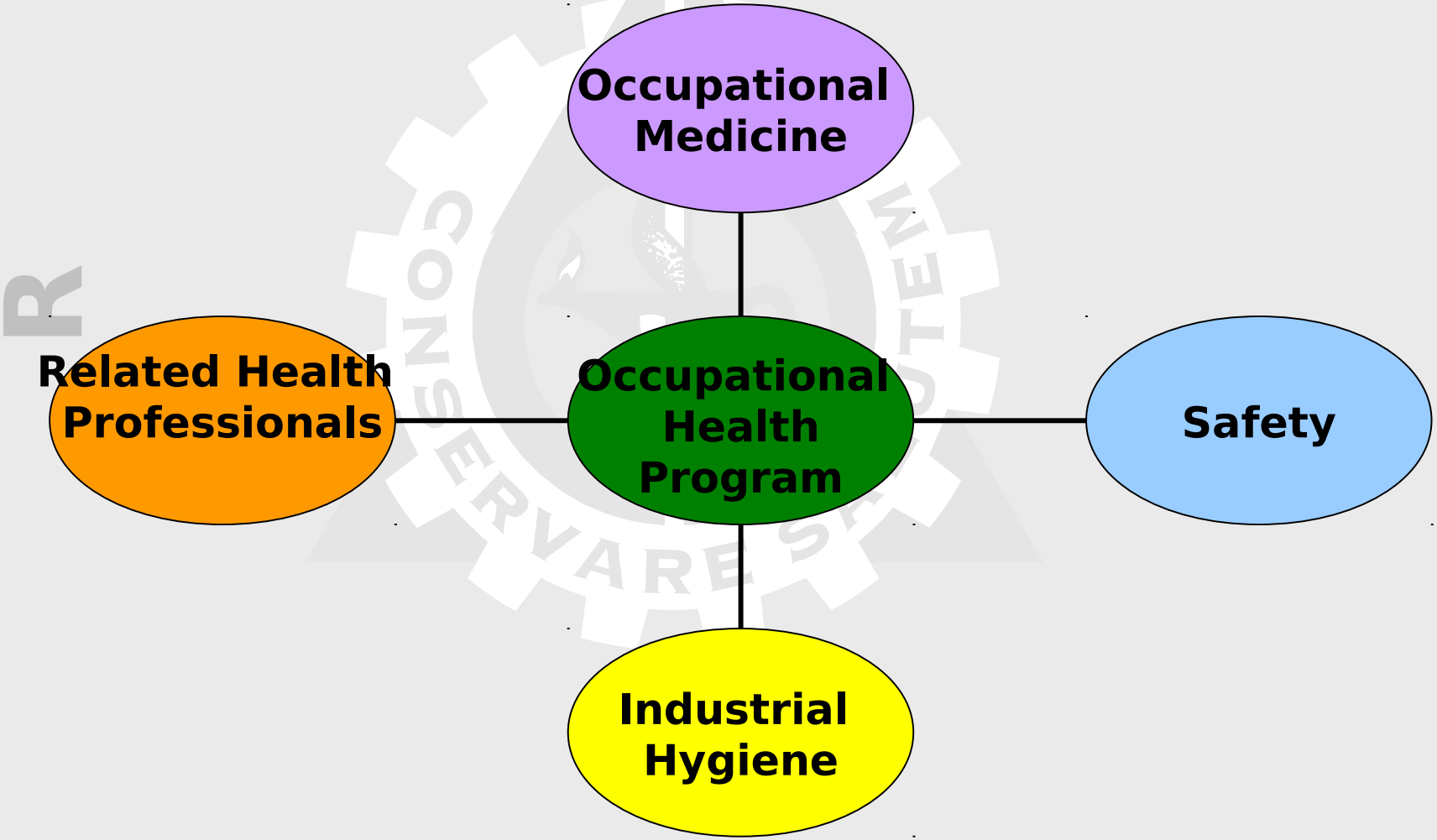
Occupational Safety and Health Program



Industrial Hygiene Program Goals

- Eliminate or control workplace health hazards to prevent occupational related illnesses, injuries, or deaths of Soldiers and civilian workers.
- Reduce costs associated with lost man-hours, medical treatment and surveillance and workers' compensation claims.

Difference Between Safety and Industrial Hygiene

- Safety deals with acute health concerns, Industrial Hygiene deals with chronic health concerns
- Safety hazards will injure you quickly, IH hazards take longer
- There is an overlap of interests.

IH differs from Safety

IH focuses on long-term, chronic health hazards which might result in occupational disease

IH evaluates the magnitude of employee exposure through defined sampling protocols and strategies

IH analyzes systems and processes to prevent illness

IH differs from Safety

Safety focuses on short-term acute hazards that can result in injuries

Safety evaluates the magnitude of employee exposure through defined sampling protocols and strategies

Safety analyzes systems and processes to prevent mishaps & failures

IH differs from Safety

Safety has

Industrial Hygiene has

IH differs from Safety

In Mannheim, Safety has

• Mr. Peter Schmelzle, LN, USAG, Mannheim	385-3453	
• Mr. Ernst Arndt, LN, USAG, Mannheim		385-1670
• Mr. Joseph Michalkiewicz, US Civ., 5th SIG CMD	380-5119	
• Mr. Werner Hermes, LN 5 SIG CMD	380-5117	
• Mr. John Engleman, US Civ., 7th Sig Bde		385-2383
• Mr. Mark Todd, 43rd Sig Bn	370-6770	
• Mr. Andrew Gancare, 43rd Sig Bn	370-7625	
• Mr. James Speelman, US Civ, 2nd Sig Bde	381-8174	
• Mr. Hans Ehrismann, 6981st CSG	382-4640	
• Mr. Robert Myrick, US Civ., 18th MP Brigade	382-5629	
• Mr. Oliver Wagner, LN 95th MP	381-7282	
• Mr. Dieter Donhardt, LN, 2-502 Avn	382-4343	
• Mr. Doug Hayes, Contractor Safety, Dyncorp, 2-502 Avn	382-5427	
• Mr. Wolfgang Buch, LN, 28th Trans	382-5734	
• Mr. Ferdinand Wojacek, LN, 512th Maint Co	384-6102	

IH differs from Safety

In Mannheim, Industrial Hygiene has

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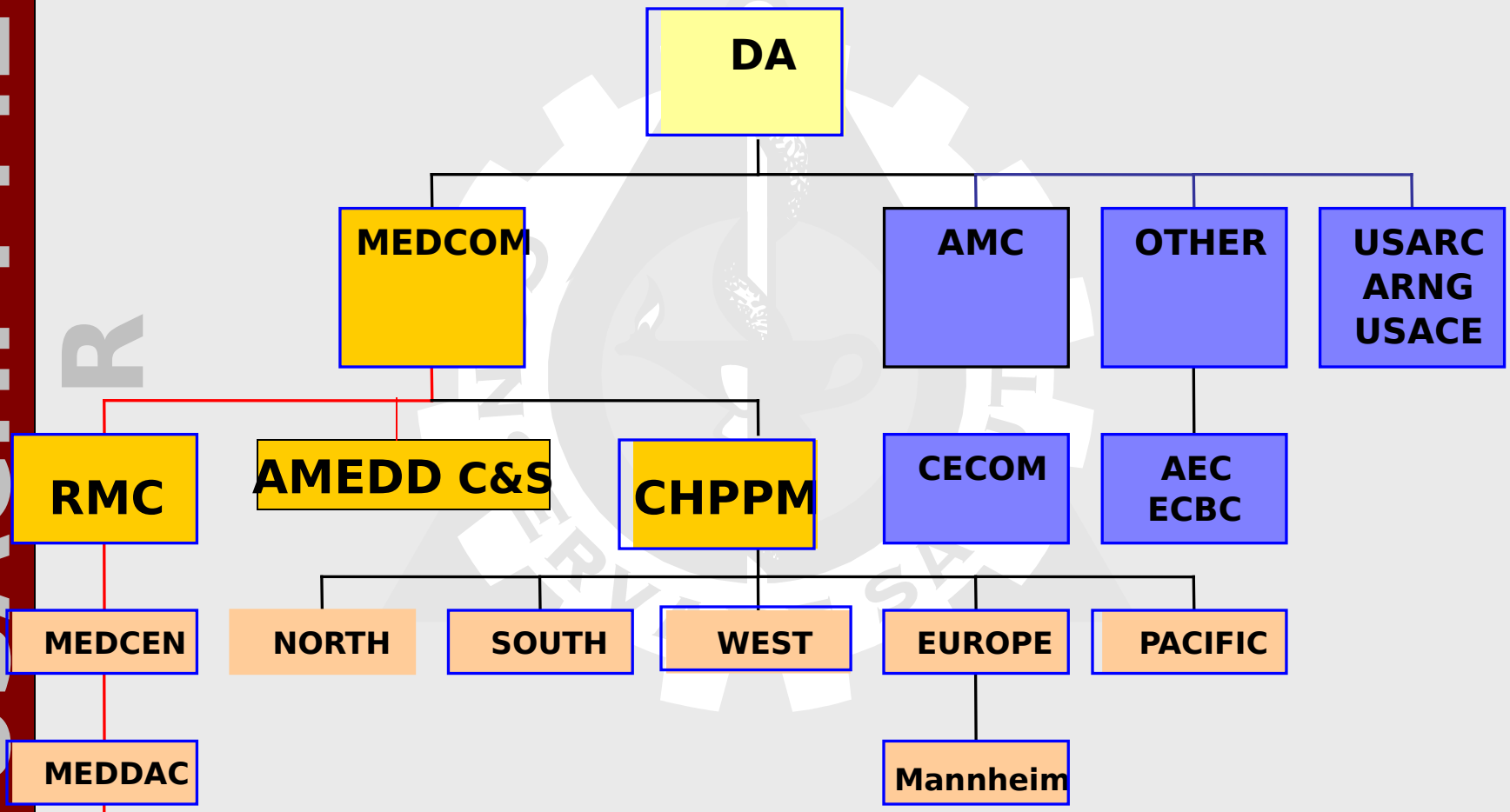
Building Blocks of IH Programs

- **DoDI 6055.1** **(Occupational Safety and Health Program)**
- **DoDI 6055.5** **(Occupational and Environmental Health)**
- **AR 40-5** **(Preventive Medicine)**
- **DA PAM 40-503** **(Industrial Hygiene)**
- **Must follow most stringent regulations or consensus standards**

Where Can You Find an IH?



How Does IH Support DA?

- IH is found in various DA functional areas:
  - Research
  - Health Hazard Assessments
  - Garrison
  - Medical Treatment Facilities
  - Deployment
  - Standard Setting Committees

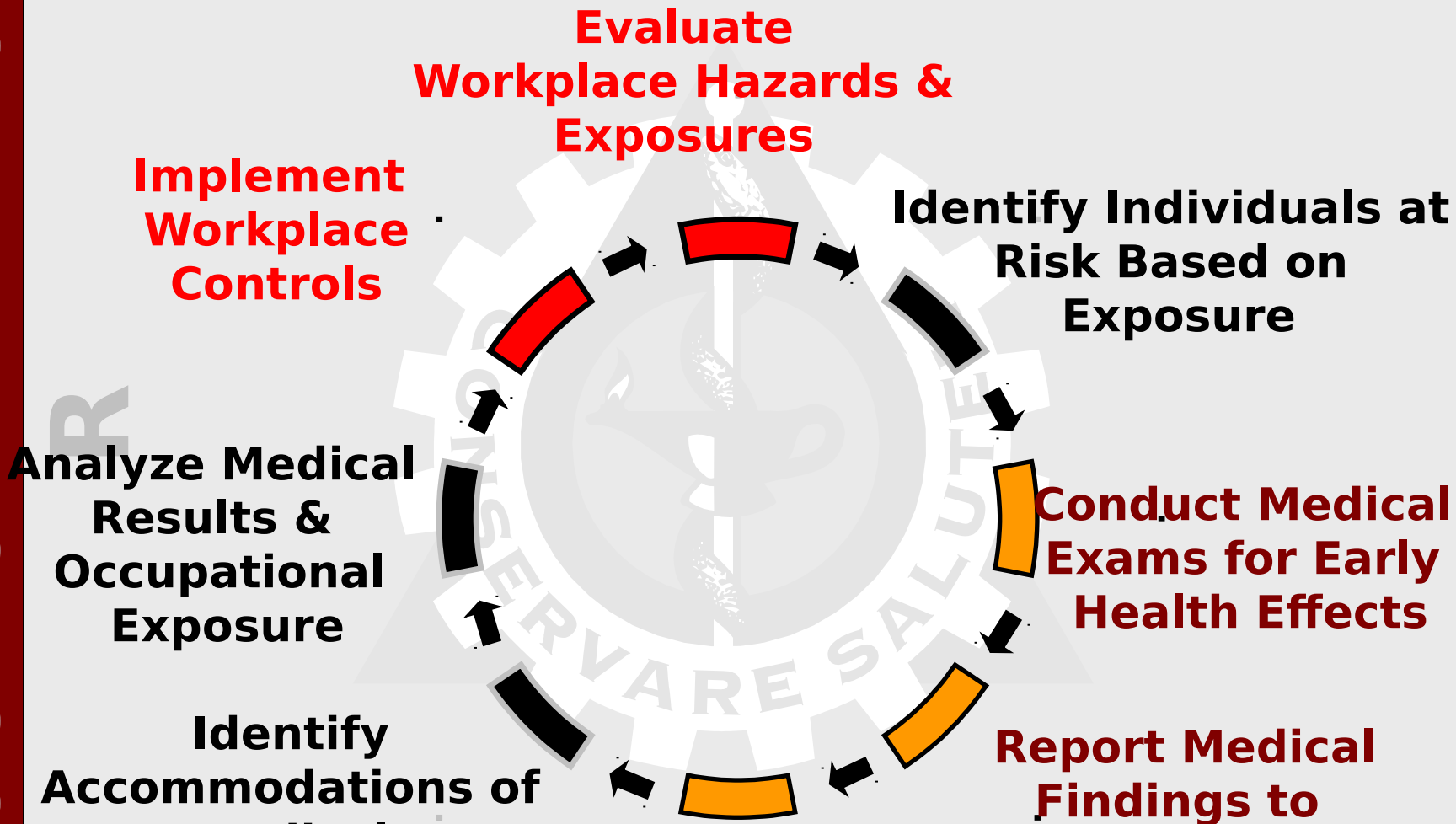
How Does IH Support DA?

- IH has technical expertise in data collection & analysis
- IH makes, prioritizes & implements recommendations

What does Industrial Hygiene Do?

- **Chemical Hazards**
- **Physical Hazards**
- **Biological**

DOEHS Responsibilities


Evaluate Workplace Hazards & Exposures
Identify Individuals at Risk Based on Exposure
Conduct Medical Exams for Early Health Effects
Report Medical Findings to Employees
Determine Employee Medical Restrictions
Identify Accommodations of Medical Restrictions
Analyze Medical Results & Occupational Exposure
Implement Workplace Controls

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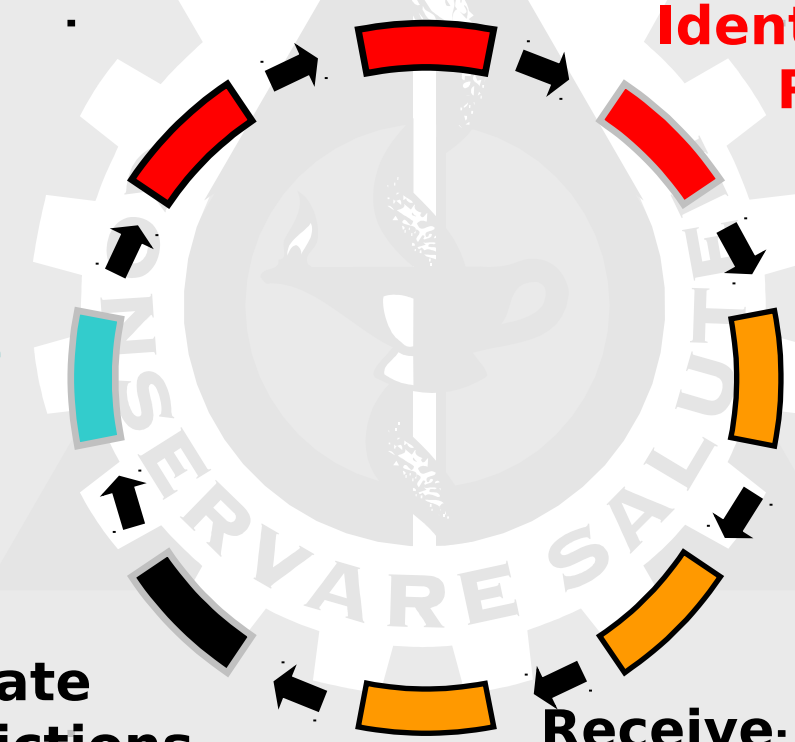
IH Responsibilities

- Conduct comprehensive IH surveys of worksites
  - Baseline IH site visits
  - Annual IH site visits
  - Special purpose IH site visits
- Recommend hazard control measures
- Track control implementation

Unit Responsibilities


Request Workplace Hazard Evaluations
Identify Individuals at Risk Based on Exposure
Support IH Evaluations for Early Health Effects
Receive Industrial Hygiene Findings
Accommodate Medical Restrictions
Implement Workplace Controls

Physical Hazards

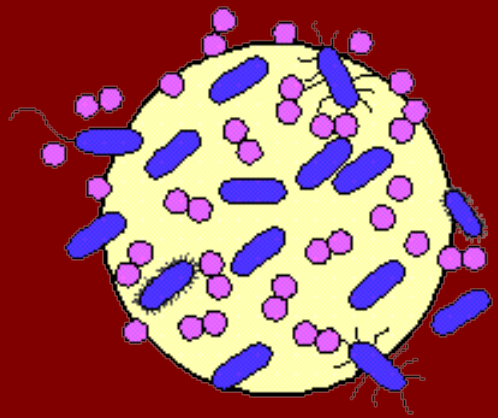
- Noise
- Ergonomics
- Light
- Radiation (Ionizing and Non-Ionizing)

Chemical Hazards

- Carbon monoxide – vehicle exhausts
- Cleaning materials – skin hazards
  - Organic solvents - degreasers
  - Inorganic cleaners – acids
- Carbon dioxide
  - Exhalation byproduct

Biological Hazards

- Bacteria
- Viruses
- Fungi - Mold



Hierarchy of IH Controls

- Engineering
  - Isolation/Enclosure
  - Ventilation
  - Process changes
- Administrative
  - limit duration of exposure
  - good work practices, housekeeping, maintenance
- Personal Protective Equipment
  - last resort
  - short exposures
  - For lungs, ears, eyes, face, skin, feet

IH Support

- Other worksite visit issues
  - Ergonomics
  - Indoor Air Quality Complaints
  - Cases of elevated medical surveillance results
  - Collaborate on deployment issues
  - Radiation Protection

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Industrial Hygiene Services

- **Health Hazard Inventories** - An on-site visit to evaluate all potential health hazards in the workplace to prevent occupational injury or illness. Includes the survey of equipment and operational procedures, collection of samples, and preparation of a report indicating the presence or absence of hazards. Recommends more detailed study if required.

  Industrial Hygiene Studies - A major on-site visit to solve a known problem. Includes a more detailed inspection, evaluation, and sample collection, and a more extensive effort by the consultants involved. The report contains detailed guidance for engineering or administrative control measures and/or recommendation for use of personal protective equipment.

  Indoor Air Quality Surveys - The process of studying, evaluation, and control of indoor air issues related to temperature, humidity, odor, and cleanliness.

  Ergonomic Assessments - An on-site visit to evaluate workplaces, environments, jobs, tasks, equipment, and process in relationship to human capabilities and interactions for the prevention of ergonomic injury. The organization's Ergonomics Program is reviewed for effectiveness.

  Ventilation Surveys - Evaluations of existing exhaust and supply ventilation systems in the workplace to assess effectiveness to control or reduce potential employee exposure to hazardous chemicals. Examples include welding, operating rooms, battery shop, paint booth and vehicle exhaust system.

  Facility Design Reviews - The provision of professional engineering and technical advice concerning Occupational Health and Safety aspects of modernization, expansion, or new construction of US Army facilities during concept, design, and construction phases. Includes recommendations for improvement or preparation of a report as appropriate.

  Hearing Conservation Studies - The most desirable hearing conservation measure is reducing noise levels at their source and eliminating harmful health effects. Noise hazardous operations are evaluated and identified enrolled into the Army hearing Conservation Program.

  Personal Protective Clothing and Equipment Guidance - Hazards evaluation of the workplace is conducted to determine personal protective clothing and equipment (PPCE) requirement. A program evaluation is performed to ensure PPCE users are training on use, care and limitations of the equipment.

Industrial Hygiene Services

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RIH Issues in Mannheim

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IH Issues in Mannheim

Hearing Conservation

Noise Protection

IH Issues in Mannheim

Hazard Communication

Hazard Knowledge

IH Issues in Mannheim

Personal Protective Equipment Use and Storage

Exhaust Ventilation

IH Issues in Mannheim

Eye Washes – Maintenance

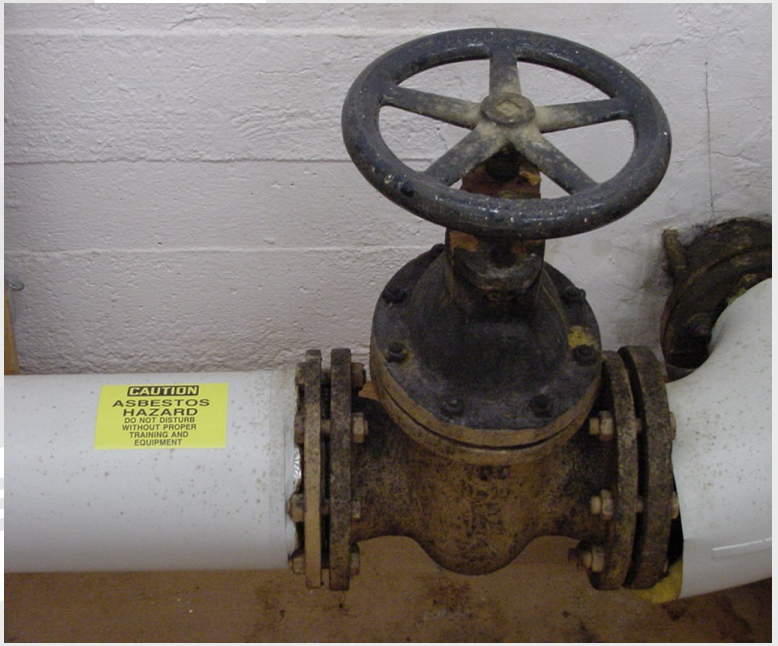
Respiratory Protection - Selection

IH Issues in Mannheim

Asbestos Abatement

Confined Space

Emergency Response



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Department of Environmental Sciences

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Mission

Provide preventive medicine support to garrison and deployed personnel and communities for the prevention of disease, illness, and injury associated with entomological, environmental, and radiological threats to civilian and military members assigned to EUCOM and CENTCOM.

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Customers

USAREUR, USAFE, USNAVEUR, IMCOM-EURO, EUCOM, AFRICOM, CENTCOM

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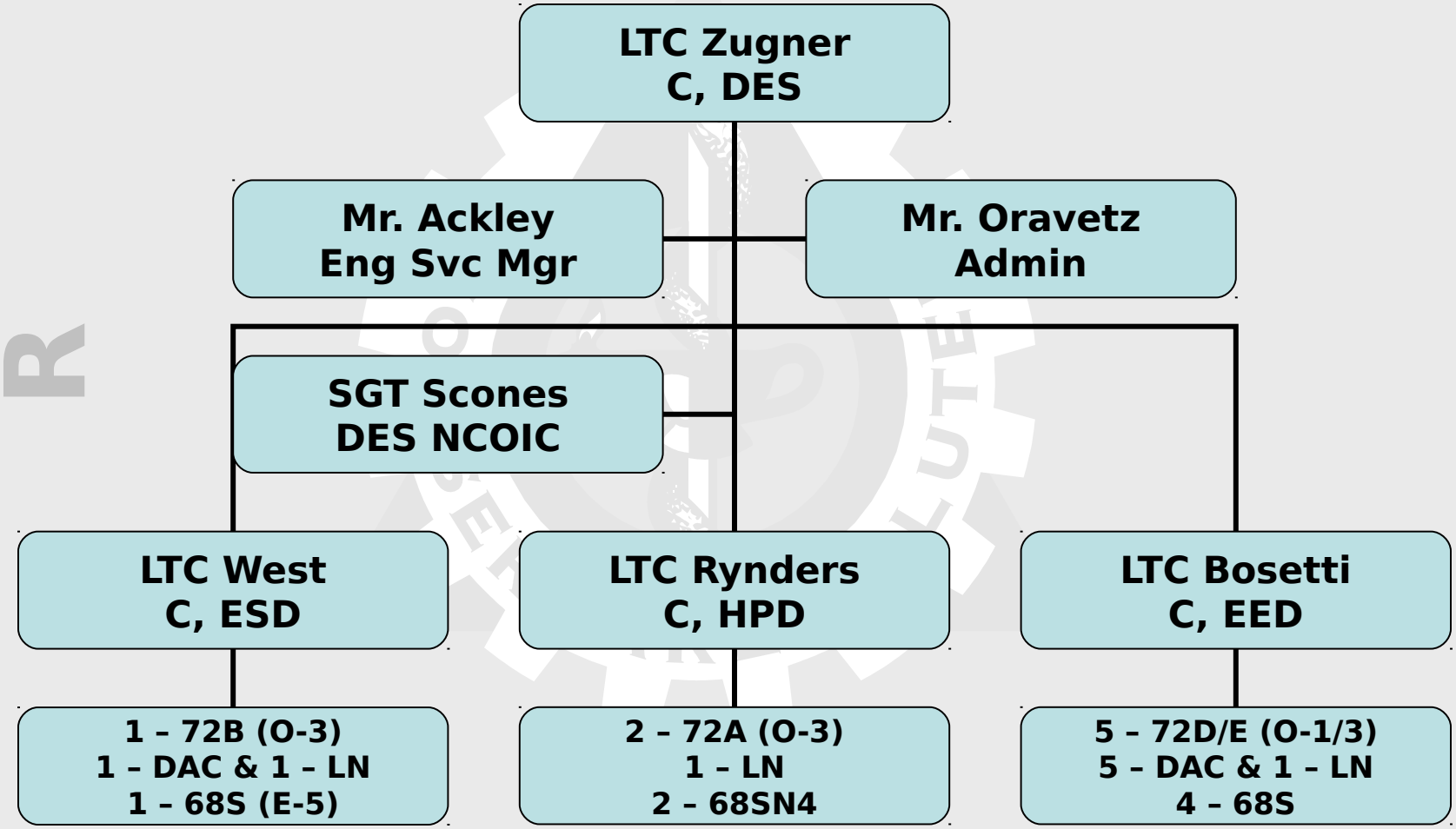
DES Organization



Department of Environmental Sciences

Divisions / Programs

- Environmental Engineering (EED)
  - P-31 – Drinking Water Surveillance
  - P-38 – Soil and Groundwater Investigation
  - P-47 – Deployment Environmental Surveillance
  - EPAS – Environmental Performance Assessment
- Entomological Sciences (ESD)
  - P-18 – Entomological Science
- Health Physics (HPD)
  - P-24 – Non-ionizing (Radiofrequency)
  - P-27 – Industrial
  - P-28 – Medical

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Installation Support (FY07 to Date)

- Drinking Water Surveillance Program – (2)
- Drinking Water Quarterly Monitoring - (8)
- Lead & Copper Monitoring Program – (4)
- Environmental Performance Assessment System- (3)
- Sanitary Surveys- (1)
- Water System Vulnerability Assessments - (3)
- Emergency Response Plans- (4)
- Water System Flushing Plans- (1)
- Subsurface Studies- (1)
- Pest Management Program Reviews- (2)
- Pesticide Applicators Certification & Recertification Courses – (3)
- Special X-Ray Machine Surveys – (3)
- X-Ray Shielding Evaluation – (2)
- Local Radiation Safety Officer Course – (2)
- DRMO Surveys – (11)
- Health Physics Consults- (2)

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QUESTIONS ????

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For More Information

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